

Alphonse





1894

1894

Feb. 2nd Walked in the direction of Rydal Lake.
 Noticed yellow crocuses growing out of doors
 for the first time this year. & picked some of
 the budding ash-tufts.

Feb. 3rd. Noticed what a number of different
wrasses grow here. Some brain like dead leaves,
 some like miniature pine-trees, some like ferns
 & some like pale grey fairy trumpets.
 The walls were in one place covered with the
 Creeping lead-flax.

Feb. 5th Noticed the rocks were covered with
 pieces of slate. Did not know they were all
 made of slate. The hills opposite Lough Rigg
 were looking lovely in the sunshine with the
 shadow of the Lough Rigg falling upon them.

Feb. 8th A lovely day - very sunny at intervals
 with heavy clouds floating about, but no rain.
 We walked to the Skelwith falls which were very
 full owing to the rain. Noticed how they make
 use here of big slabs of stone instead of gate
 posts. by boring holes in the sides & inserting
 poles in them. It is a good idea as they can
 be easily removed when necessary.

1/10/1662

2. The catkins of the hazel were very conspicuous. Some of them prettily tinged with red, others very long. The lichen looked especially beautiful growing among the mosses on the stone walls.

I was surprised to find a red oak-gale on an oak leaf remaining from last year.

One piece of rock that we passed reminded me of the caves on the Guernsey coast - it was streaked with red & yellow & the water was dripping from it; the little streams trickling from the mountains to join the Brathay river, & with ferns growing by the sides of them also made me think of Guernsey. I was glad to see old plants of heather, fox-gloves & the wild strawberry as a promise of what the spring & summer will bring. The approach to the falls is very picturesque & the falls themselves grand.

Feb 9th - 12th Too wet to go out.

Feb. 13th I noticed the young willets about two inches above the ground. The fox-glove plants had grown as large as a full-sized saucer. & the fields were covered with the first tiny leaves of the buttercup. They are so much cut into that they can easily be distinguished from the grass & from the smooth even-edged daisy leaf which is generally to be found closely

1/10/1662 3

Feb. 14th. Very cold but fine. I saw the primrose buds just coming out

Feb. 16th A pouring wet day. Went to Stock Ghyll Gates, which were very full. Noticed the walls of the rocks were covered with saxifrage, saxicle & wood-sorrel all of them just putting forth their first leaves.

Feb. 19th Fine & cold. The trees on the road up to Rydal full of spring buds. The fat red buds of the lime were beginning to grow thinner & show green at the top. Noticed how only one side of the stone walls was covered with moss - showing which was the north.

Feb. 27th Lovely spring day. The schemach leaves were beginning to uncurl; the lesser periwinkle was blossoming in the Blackrigg churchyard, & for the first time I saw a fully opened spray of laurestinus - but then that has been out for a month or more.

March 6th The weather has been so wet it has been impossible to walk out except with a michtoh & umbrella which are not favourable to finding specimens. but though it was very dull today many interesting things were pointed out to me. I saw the difference between the waymoneth & leotell pine. The latter having spines growing in clusters of two, the former in clusters of five or seven.

I saw the bitter-cross
that-cross, one-leaved
saxifrage with its little
tiny white star of a flower.

11p6pneu162

4. The black-berryed wⁱp grows in quantities on the side of the Rothay bridge. We gathered what we could bear of it. I was shown a wild cherry tree which looked when in bud very like the oak except that the colour of the tree is different. The tulip tree is placed alternately with the lime just beyond Kelsick House. It can easily be recognized by its angular branches and twigs.

The American red currant was already flowering in somebody's garden. I never remember seeing it flower so early in year.

The wild sage is coming well into leaf now, it is so much like the cultivated plant that it is easy to recognize, & the Japonica's black stem is buttoned all over with its close bunches of red flowers.

March 7th The stock phyle tales were looking lovely today but not quite so fine as they have been. I went right down to the bottom of the steps because so many plants grow on the sheltered bank. The golden saxifrage was flowering. It has funny little insignificant flowers, & the garlic leaves were sprouting up everywhere with crane's bill & wood sanicle but none of these are flowering yet.

Mar. 12 & 13th. Dull cold days - noticed no fresh flowers

March 14th A lovely spring day; the students came in from their walks with their hands full of celandine & coel's foot.

The first anemone & wild primrose were found also.

The next day the students saw the leopard's bane in blossom



11p7pneu162 5.

Mar. 17 to 20. A week of lovely weather. One of the students brought home branches of larch bearing the red cone-shaped flower. I was taken to see the fir-tree that is growing vertically on the branch of an older tree. It looks very curious & has scarcely seeded there. It is on the Rydal road. We sat upon the wall & looked over Rydal lake for some time, & though so early in the year it was almost as warm as June.

18th Palm Sunday. The palm was blossoming very where. The students came in with their hands full.

20th Both beautiful days. I did not walk far.
21st Walked by the Rothay & sat upon the stone wall for a long time. The air was full of spring sounds & the colours on the mountains were beautifully varied.

22nd Good Friday. For the first time I saw Nab Scar from the opposite side of Rydal Lake. It is much finer from that point. The wild ducks in the lake were very excited. We were interested in hearing the echo of the coach horn on the bridge.

24th. Every house I noticed as I walked up the street in the sunset had daffodils in the window for Easter Sunday. The hyacinths in the Hill's house were all drooping as if their day were over.

Easter Sunday. A most jubilant day. The early service was very beautiful; the every grave in the churchyard had upon it a cross of daffodils.

The whole air seemed to be full of them. I received the first orange blossom from the Florida grove -

6. March 27. Drove to Coniston Lake. The view of the bare rugged mountains very grand. Saw quantities of patches with red flowers. Walked from Waterhead to Brantwood. Picked violets & primroses by Ruskin's house, & the flowers of the maple. Came home by the Langdale Pikes & Goo Valley. Saw the famous yew tree which is many hundred years old. Sometimes the sides of the mountains were covered with juniper bushes.

March 28th 29th. Went over Longrigg in search of the Fern and daffodils. Found the stag's horn moss creeping on the top & lovely bunches of larch with the tiny red cones. Near a small waterfall the Hare Fern was growing & spleen-wort.

March 30th. Found Liver-wort near Fox How and the Bird Cherry tree near the Rothay. It has ^{appearance} very different from the Wild Cherry. The leaves of the yellow poppy have grown quite large.

April 2nd The yellow poppy plants are in bud & the maple flowering on the Windermere road. Some of the students have brought in the wild cherry in full flower & the ash has burst into little clumps of dark purple flowers.

April 5th The Bitter Gloss in flowers - a little tiny white flowers. The lady's mantle plant developing - ground ivy in flower; springing in bud. Oxin in flower. Bramble has been in leaf some days.



Black
Spleen-wort

April 6th The wild plum was brought indoors in full flower, & the wild raspberry. The stitch-work was found at Lazonder & the tooth-work growing in a waste place on the Rydal Road.

"When no y plumb'le larch 'tis larch" (Therry Son.)



11P8pnem162 7.

April 8th. Found the garlic well in bud. Ash in full flower.

April 9th. The Blueberry in full flower on the banks of Stock Ghyll. Crossed the stream & found quantities of wild cherry, & anemones on the other side. All the fern plants were putting out new fronds.

April 10th 11th. There were quantities of dog-violets growing in between the stones on the Rydal Road which the students annoyed me by picking - They looked much prettier growing.

April 12th. A pouring wet day. We saw a white flower with little brown leaves in Canon Bate's garden.

April 13th The maple in flower & leaf was brought in; two kinds of spruce with new cones - a handful of Marsh Marigolds & the sycamore in flower - & the Willow in seed. The wych-elm with keys fitting tightly on the stem is very pretty just now. The lambs are growing much prettier & may always be found on the top of very available hillock.

April 14th

Very wet all the afternoon.

April 15th Found the leaves of the Columbine on the way to the moor.

April 16th Beech in flower - & Wych Elm seedling. The Muscatal found on the way to Stock Gill.

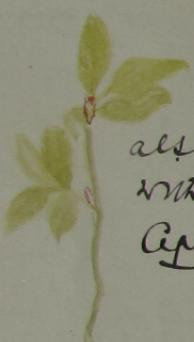
April 17th & 18th Herb Robert, & Herb Paris in flower. The wood-saxifrage in bud & the wood-ruff in flower. Milick-grass Blue-ball in flower. Beech-fern & oak fern in fronds. The Beech-fern has the two last frondlets turned down in a different direction from the rest. The oak fern curls its fronds up into three little balls before coming out. The leaf bears great resemblance to the oak. The white mock-wort & bitter vetch were also in flower. All these were found in downland with quantities of primroses.

April 19th Primroses everywhere.

"Welcome pale primrose, starting up between dead matred leaves of oak & ash..."

I walked to Grasmere by the terrace above Wordsworth's house. The view all the way was charming - The patches of larch on the opposite side of Rydal are almost too bright a spot in the landscape. Wordsworth was not fond of these trees & has criticised them very severely.

The Bracken was putting forth its fronds all over the mountains, indicating the poverty of the soil; they are early this

April 19th

Turquoise Eyes. (Keats.)



year on account of the warm weather. 9
Bracken does not like the frost; it is that which turns it brown & red in the autumn. We found the delicate Parsley fern, growing freely in the crevices of the stones. The oak-tree too was just beginning to flower.

"Those green-robed striders of mighty woods" Keats.
April 20th Two bumble bees & two white butterflies.

April 21st Went to Lowood. The weather lovely. The wood is carpeted with scented violets and primroses. We found several orchises & the yellow loose strife

April 23rd The east wind was very cold - walked by Windermere & tried to reach the bird cherry blossoms. The garlick is fully out everywhere. The Broom has been seen in flower for some days now.

"Twas that delightful season, when the Broom, full flowered and visible on every steep Along the copse runs in vines of gold" Wordsworth. It is very early this year - generally I do not find it until late in May. There is very little of Colenage's "Never bloomless June" here.

April 24th Very cold & rainy on the way to Lowood - very warm coming back. The Bugle found the way to Troutbeck.

The Potentilla repens & the Cuckoo flower also brought in. Cuckoo Pint, or Arenaria or Lady's Lade has been flowering for some time but I only saw it today.

Some one heard the cuckoo, but I have only distinguished calls at present. Water Avens was brought in to day but it has been flowering here before. Mare's tails are springing up everywhere - but I do not like them.

11 p 13 pm 162

¹⁰ The Sea-pea is flowering among the marsh marigolds on the borders of the lake & we picked great bunches of Crab-apple today.

April 25th, 26th, 27th. Fine days but a very cold east wind.

The beautiful yellow globe flowers are growing in clumps on the stones in the middle & by the borders of the streams & yellow Welsh poppies are opening by the road-side. We found a pretty red & yellow oak apple -

May 1st. Today we were startled

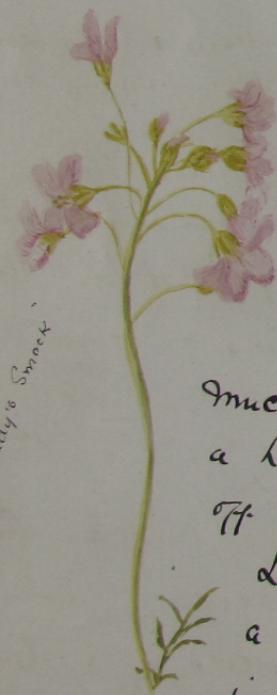
by hearing a lone tittering among the spars in a lime tree on the way to the Noak. A rustic ran up behind us & told us with much excitement that a hawk was carrying off a young bird.

Later on we found a black-bird's nest in a very low shrub in the Noak with one egg.

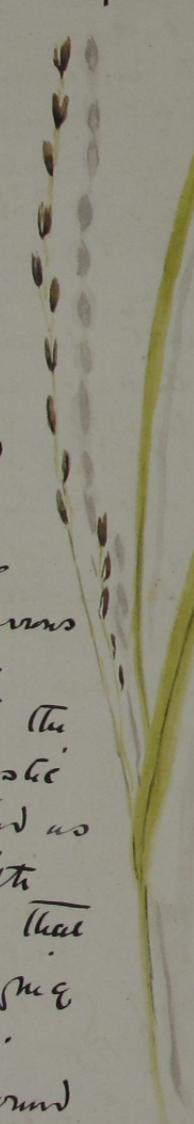
Which we did not take, but I intend to catch it.

The Noak was breathing the very essence of spring. The slopes were covered with bluebells & violets & all the ferns were unfolding their fronds.

The Hyacinth did not at all keep up the reputation which one of the



"Cuckoo flower" or "Lady's Smock".



"Marsh Marigold".

Noak has given it,

"The melancholy Hyacinth that weeps All night & never lifts an eye all day" but it may have been the effect of the sunshine & the first of May.

May 2nd A very wet day.

The Ladys mantle in flower.

May 3rd Found the Water Arums on the way to Dentry's Crag - We found quantities of Broom in flower. but as it was very cold & raining poring I did not connect it with what Wordsworth has said

"Twas that delightful season, when the Broom,

full flowered & visible on every steep

Along the Capes runs in veins of gold". The Cinnamander-pedunculata has been out for many days & is beginning to carpet the banks.

May 4th. Sunday - went to church in macintoshes.

May 5th, 6th. Showery days. Nothing new was brought in.

May 7th. The pretty pink bistort found on the Whidernoe road, & the oak-trees are covered with currant galls - last year all the galls were sprangled - Lubback pointed out their accumulation of galls in the oak.

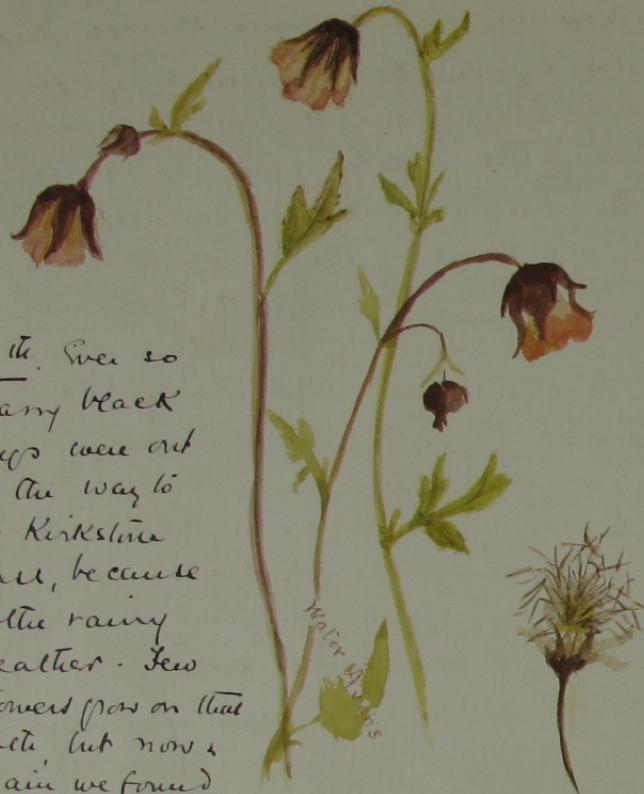
May 8th, 9th. Still showery but very fine in the afternoon. Quantities of copper beech, crab-apple, blossom & marsh marigolds - a tall yellow cross called Winter Cross. because the leaves are used for a vegetable during the winter. Red Sorrel in flower & the Rowan tree

11 p 13 pm 162

Ulex Europea.

"For every approach it took
Drew to defend it,
"Proven first
With golden basket-husks"





May 10th. Ever so many black sheep were out on the way to the Kirkstone Pass, because of the rainy weather. Few flowers grow on that path, but now, again we found patches of cuckoo flower & marsh marigolds. Some of the students brought in the Mountain Penny & Mountain Primrose, as well as the Red and Purple Sorrel.

May 12th Whit Saturday. A lovely day, but very windy. Walked by Windermere but did not go far enough to find any specimens.

May 13th Sunday - very bright in the morning, but cloudy in the afternoon. We found quantities of stitchwort, mullein grass in the little caps by Windermere.

May 14th. A pouring wet day - We were too busy to go out for a walk even if it had been fine.

May 15th. We trespassed in some fields opposite Springfield & found the clover in flower. There is a nice terrace at the top but there were people there so we could not walk on it.

May 16th. Very showery & windy. We all went out in macintoshes again.



Behind Springfield we found some rocks perfectly covered with wild hyacinths. A little way off they looked like a shadowy blue cloud. The bare rocks peeping through the soil; the bright green of the ferns beneath & of the oaks overhead made a lovely picture. Some of the students brought in the Yellow Rattle and the Brook-Lime found on the way to Brathay church. The Seath Pine is in flower - it has stiff yellowish flowers that already show they are going to turn into cones. These are generally in pairs above the shoots of the year. It is sometimes spoken of as

"The gloomy Pine" in company with "the bonnie birch."

"The Pine is King of Scottish Woods
And the queen - ah! who is she?
The fairest form the forest knus -
The bonnie birken tree."

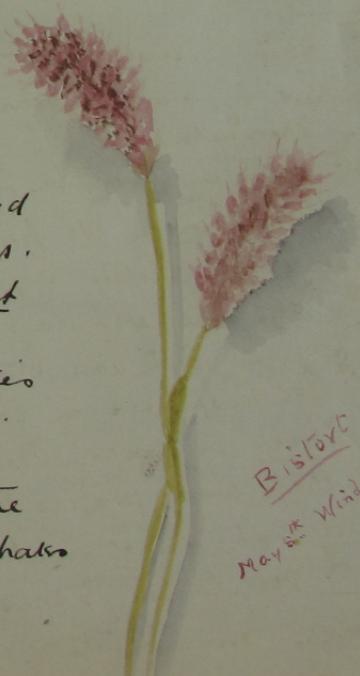
May 17th.

A lonely spring day. We went to the top of Long Rigg & found over so many things. First the fragrant Mountain Fern growing in granite near the streams.

It is so called on account of the sweet odour it exhales when crushed.

Mossy Stems
Stock Gill May 11th
Luzula sylvatica

Bistort
May 12th Windermere R?



14

Cordulegaster annulatus

Found on the top of Loughrigg just coming out of its pupa case and carried home in a glass jar & then set free.



A very little farther we found

The little mountain primrose

& the Butter work (*Linaria vulgaris*)

The leaves grow in a spreading tuft, & are incurved at the edges & covered with a greasy matter.

As they are yellowish in colour this may account for its name.

Growing in the same place was the little pink mountain Primrose & quantities of louse-work. We found the sun-dew in the same boggy ground - but it is very small at present. (*Drosera rotundifolia*)

Darwin found that a fragment of cotton weighing $\frac{1}{6000}$ lb of grain was sufficient to cause

the red hairs, like tentacles to bend.

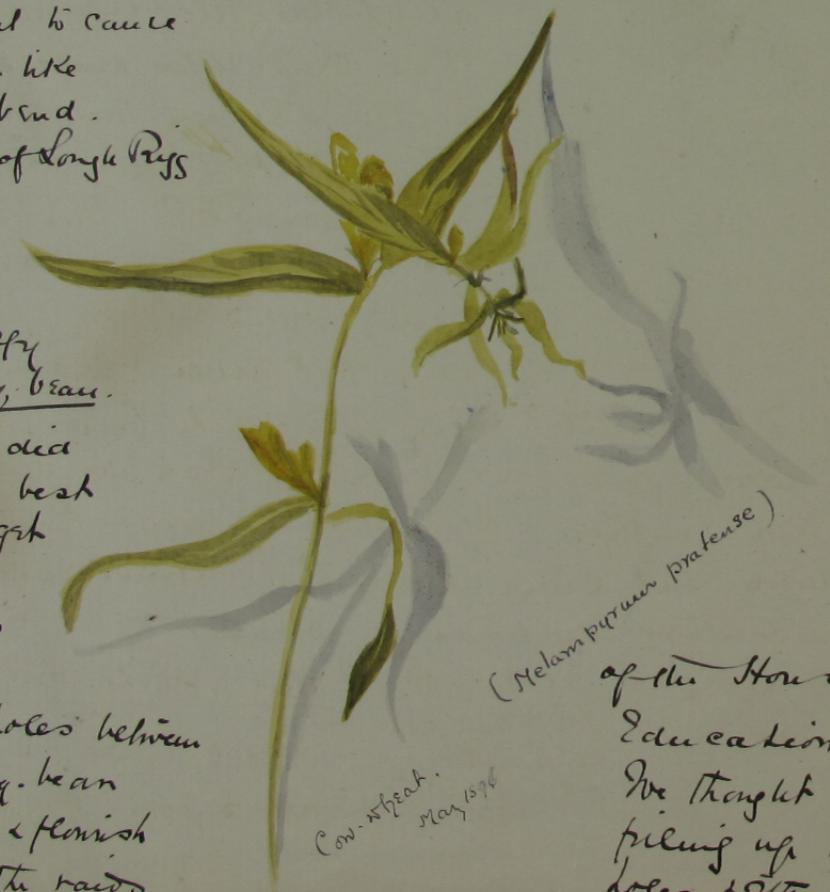
On the top of Loughrigg

we found a little tame full of the spider

fluffy
Bog-bean.

We did our best to get some, but the pond was full of stones

with deep holes between to turn the bog-bean we remain & finish scene from the rains



(*Melampyrum pratense*)

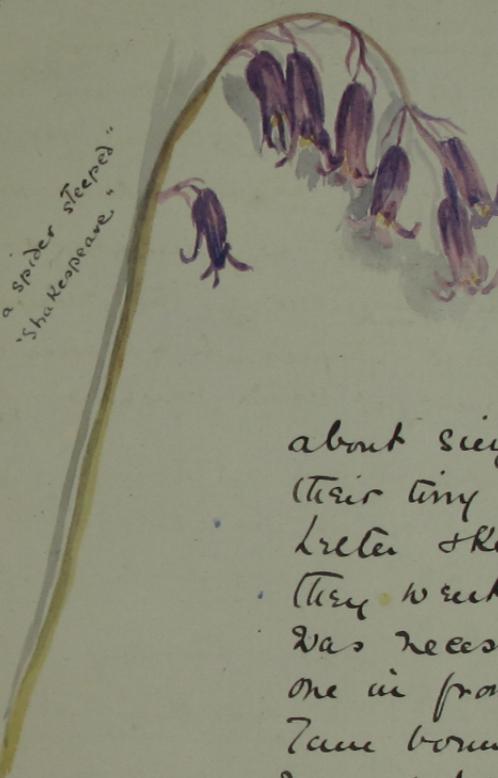
of the House of Education. We thought of filling up the holes with some

Con. heat.

May 15th 1895

15/16 May 162

The Melancholy Jacinta Ambleside May 1895



There may be in this cut a spider "she keeps a secret."

May 1895

15/16 May 162

15-

of the loose stones that were lying near

but the first one that we lifted caused such fearful devasta-
tion among the ants beneath that we had

not the heart to try any others. The ants were the same from kind

& at once began carrying about sieving their white eggs with their tiny little pieces & pushing them back & shelter out of sight. Sometimes they went a long way farther than was necessary, turning & pulling one in front & one behind - occasionally tame birds today, pulling different days, but never casting from their

nest, until every little white larva was safely hidden from our view. I wish we could have followed them farther. After that we made no more investigations but came down the mountain - only stopping to gather crab-apple blossoms & to notice the male & lady fern - & blue & white milk-work

May 18th A lovely day - I went towards Dentriggs Crags & gathered many flowers, but found nothing fresh.

May 19th. Went out on the top of Lang Rigg above Croft. Mrs Fletcher taught me the names of the mountains in the direction of the Langdales. We found quantities of parsley fern growing in bright but heavy green masses.

May 20th Sunday - Snowy in the afternoon.

May 21st Still very cold - The pink columbine found wild in Lowood.

May 24th. Went for a row on the lake & saw a heron flying from one shore to the other.

May 25th The white hulse found.

May 26th. Very snowy & cold.

May 27th-28th Good King Hall, a green plant with a tall spike growing on waste ground.

May 31st A delicious warm day. We went on the lake in the afternoon because it was the day before the botany, but I remember now that was last week. Nothing particular was brought in.

June 1st. Such a beautiful day. We steamed to Lake side by the £.35 - most thoroughly enjoying the view. The trees on the opposite side of the lake are like Thames trees.



This darling flower!

17
1918 pnewt62

We were rather cold on the steamer & I was a brass band came the German national. We went to Furness train, & some of us delighted to see Country again. more than six months now, since I have seen the horizon. We thoroughly enjoyed the Abbey, but I must only mention the plants we found in a Natural History diary. They were -



Hawk-weed. Belladonna - Cross-work - (Yellow Bed-straw) Sea-pink. White Vetch. Mt. red Daisy. Hand orchis. Large flowering Bitter-cress.

June 2nd A very wet day. We went to Stock Ghyll. It was more lonely than ever after the rain & the ferns had grown tremendously since I last went.

18 June 3rd Still pouring - I went half way up to Denton's Crag to find watercress. We did not find any - because I went the wrong way but the mists rolling down the mountains were beautiful. In the evening we went to Brathay church. It is covered on the outside with black ^{green} ivy. There is so much it spreads its arms over the stones in such a way that it looks almost like a green star-fish.

There were still some globe-flowers out.
June 4th Went with my mother to Rydal Lake. It was very peaceful & subdued - but I never sit in the sunshine.

June 5th Very wet. We went a little way up Loughrigg, the swamps were almost ponds & the brooks & springs were in a tremendous hurry. They have so much work to do this weather.

June 6th. We all had a half holiday because it was such a lovely day. I drove with my mother to Elter-Water village. A quaint little place built on the shores of the tiny lake & within half a mile of the Langdale Pikes. We stopped at Skelwith Force on the way back; the left bank was covered with globe flowers which were as usual out of reach. I could only find the butter-wort.



Dragon fly
found swimming
from its Pupa-
case.

on the right bank -

June 7th Scrambled about in the rock-formed no fresh specimens but enjoyed the view immensely. Some bluebells this week formed two new kinds of wild roses.

June 8th. Went on the lake -

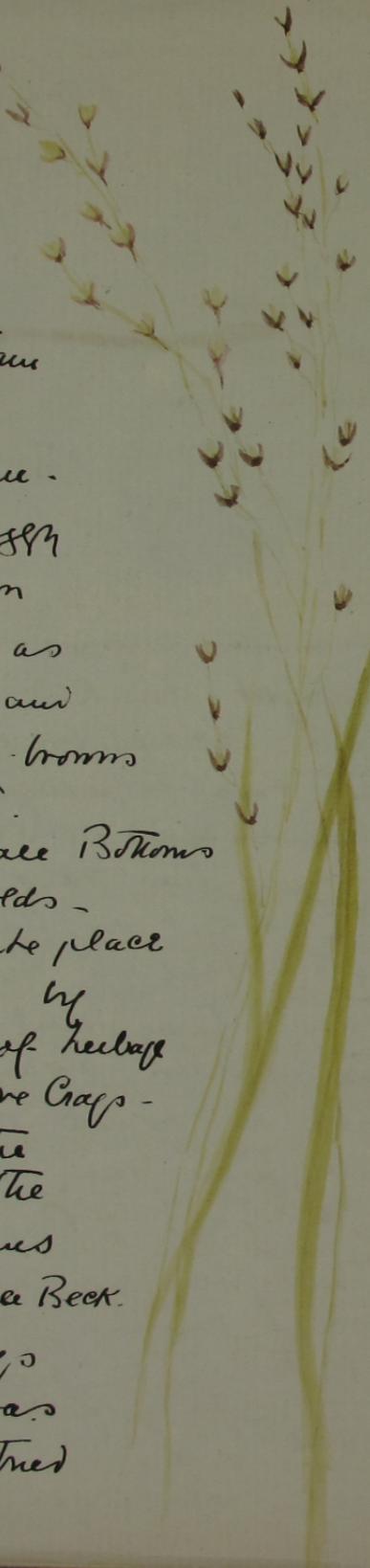
June 9th. Went to Grasmere in a char-a-banc - 8 of us. Some of them went on to Bardale - a lonely little farm hidden away in the mountains - coming back we found many forget-me-nots.

June 10th more rain & more & more.

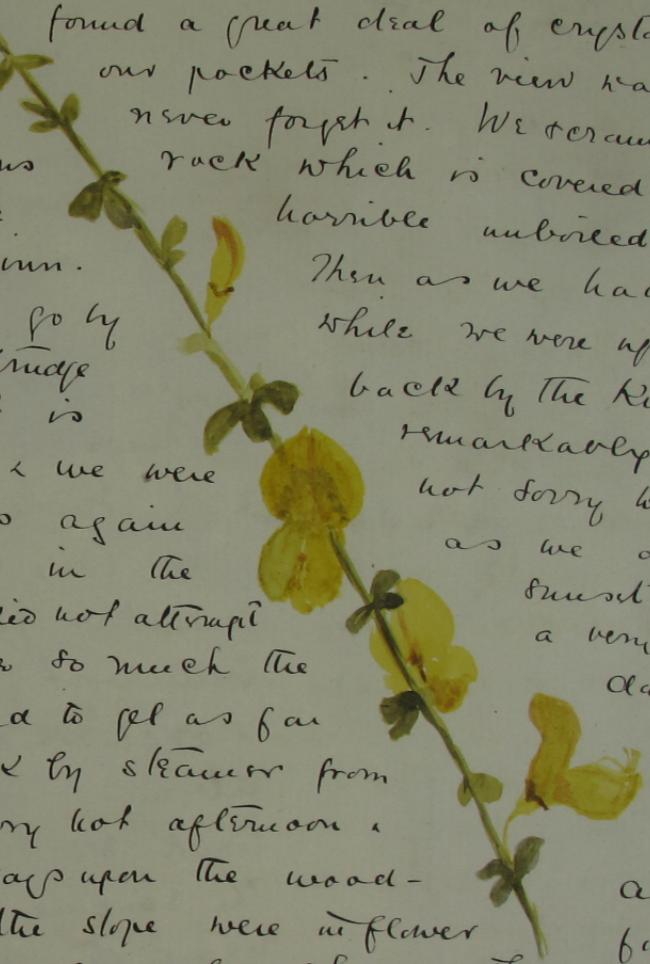
June 11th Went to Borrowdale & back by steamer. but there were no natural history specimens there except human ones.

June 12th. Scrambled about Loughrigg trying to photograph the sheep there. Brought home parsley fern - pink primroses & butter-wort.

June 13th Went to Scaedon Bridge by the Beck. Jumping over the stones, we found lovely meadows Crane's hic flowing in profuse clumps by the stream & farther on the finest globe flowers I have seen. Farther still & on the boggy banks very fine mountain primroses, & butter-wort as well as purple orchises and many butterflies - meadow browns fritillaries, orange-tips etc. We soon arrived at Scandale Bottoms which runs into Sheep. fields. It is a very lonely desolate place hemmed in on either side by rugged mountains devoid of herbage & bounded at the end by Dove Craggs. There was no sound but the bleating of many sheep & the rippling of the different streams that unite to form the Scandale Beck. We scrambled over Dove Craggs with great difficulty - it was very lonely on the top & we tried



many peaks before we came upon the Scaidvalley that leads down to Brothers Water. On the top of the crags we found a great deal of crystal which we put in our pockets. The view was so magnificent I shall never forget it. We scrambled down the precipitous rock which is covered with bilberry & had some B. Water inn. Last coach going we had to trudge. Its aspect is meany & we were and houses again Ambleside in the June 14th We did not attempt having done so much the day before but we managed to get as far & came back by steamer from It was a very hot afternoon. Poured its rays upon the wood-gloves on the slope were in flower far in advance of those I have seen elsewhere. The path was covered with flowers of all kinds - fragrant & columbine among them - a few wild roses, numbers of ferns. There were quantities of insects too, humming & buzzing & crawling - in fact we found two sun-butterflies on the top of Dove Craggs. As we neared Troutbeck we saw a great deal of living Crane's hic decorating the old stone walls.

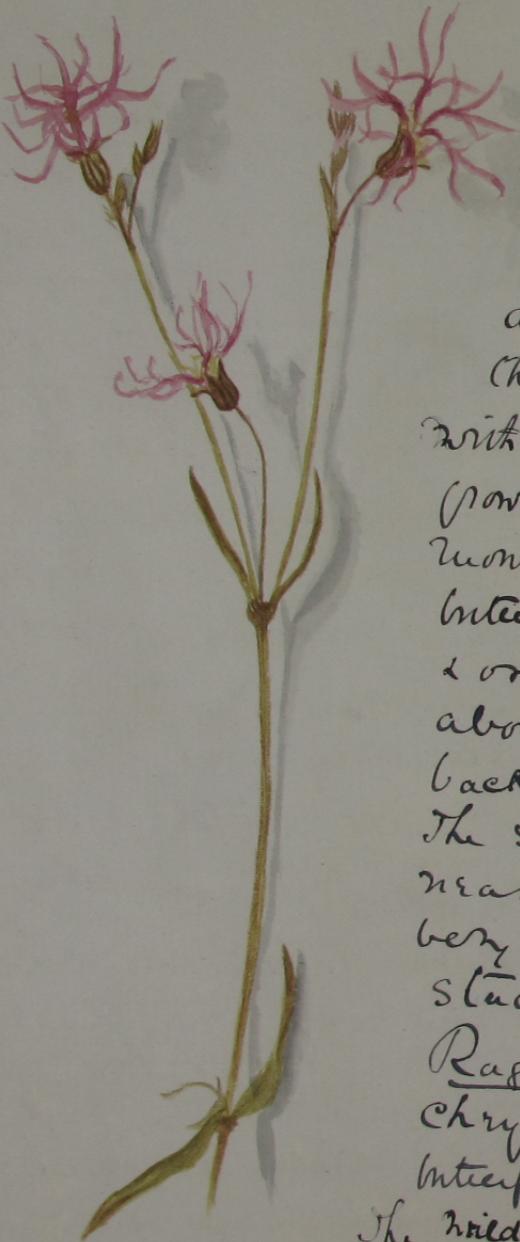


all the fox-

as Troutbeck
down-wood -
the sun

June 15th. Very wet.

June 16th Piper. work, Red roses & ox-eyed daisies
& yellow flag brought in from Ferry.



June 18th.
Hand orchises found near Tweedsmuir bridge. The bogs on the banks of Scandacee Beck are full of interesting things. They are covered with bushes in which grow large specimens of mountain primrose & bellflower, cuckoo flower & orchises - also flags abounded there. Coming back we saw a late. The singing of the thrushes near the wood was very weak. The other students brought in Ragged Robin and the chrysalises of the peacock butterfly hanging from nettles. The wild Thyme, easily recognized by its strong sweet scent was

growing among the stones in the wall, & the green bank below was carpeted in many places with the Lesser wood-saxifrage. The sun now was having a splendid meal off mountain's little Murray flag.

June 19th. Water-skaters seen on the Brathay - & Calthatic flax.

June 20th. Gathered Foxgloves at Lonsdale. In one plant we could see the stamens in all their different stages. The flowers down on the stalk were fertilized & the anthers burst. Higher up they were just bursting & the stigma had lifted itself above the reach of the pollen; higher still they were big & fat quite tight with pollen. The Spear-work buttercup was found by some of the others.

June 21st. A lovely day. Yellow flag-work & sheep's fescue found by Skelwith Falls.

Several ripe wild strawberries have been brought in as great prizes for painting.



June 22 - 23. 24 - 25.

Wet days on the whole
Nothing particular
brought in.

June 26. Very hot indeed.

We harked in the
morning about Long
Rigg. In the first
bag we found the
yellow creamy white
Butterfly orchis &

The Sweet-smelling orchis.
The Bog Asphodel was
just out, showing one little
starry yellow
flower on its
leaf from stalk.

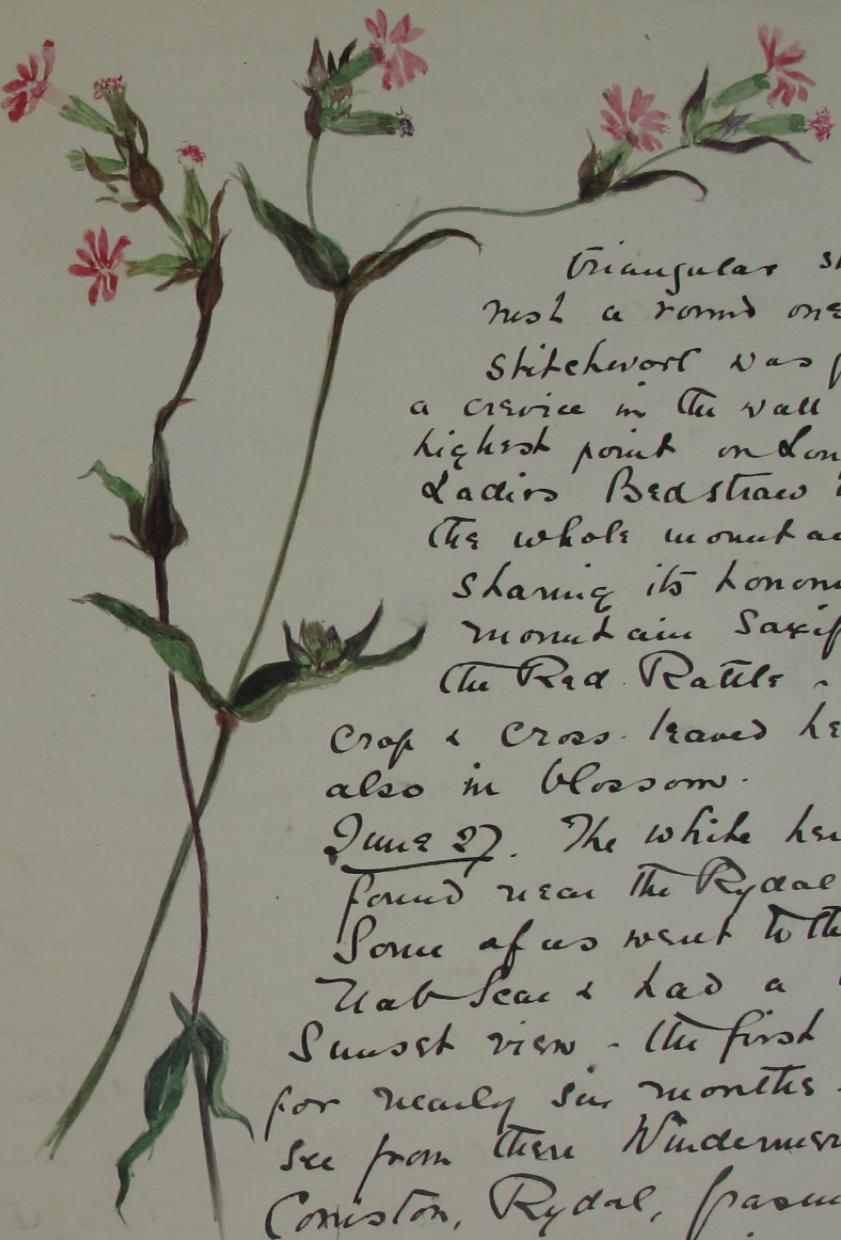
The little brown
heath butterflies had
all gone to sleep
on a rush or sedge with
their wings forward.
A little further up by a very tiny brooklet
we found some viviparous grass, that is
grass which has sprouted from new
grass out of its own leaf upon itself.
By the edge of the lake we saw quantities
of sundew & one plant was busy eating
a little heath moth struggling in its
clutches; a companion moth was
already dead & the ants were devouring
what the sundew could not digest.

We found the Juncus Squarrosum and
I found that a sedge always has a

Viviparous Grass
found on Long Rigg
June 24



Wall lettuce



triangular stem, & a
not a round one. The smaller
stitchwort was growing in
a crevice in the wall in the
highest point on Long Rigg.
Lady's Bedstraw was carpeting
the whole mountain almost
sharing its honours with the
mountain Saxifrage and
the Red Rattle. White stone-
crop & cross-leaved heath were
also in blossom.

June 27. The white herb Robert
found near the Rydal Fells.
Some of us went to the top of
that peak & had a beautiful
sunset view - the first I have had
for nearly six months. We could
see from there Windermere, Esthwaite
Coniston, Rydal, Grasmere & several
lakes.

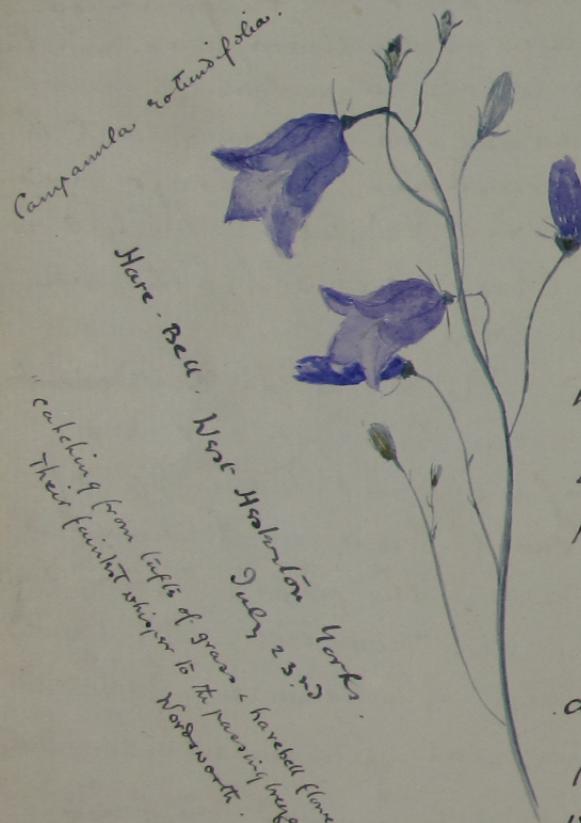
June 29. Went out determined to find
some living objects but though we hunted
diligently in the Rothery we came back un-
rewarded. There were only water skaters to be seen.

36

The Water dropwort was in flower - & the Meadow-sweet. We found also some white Herb Robert growing near Fox Howe - We turned over a stone & noticed the coral root of the Wood Sorrel.

Wood Sorrel.
July 2nd The Burnet in flower. More meadow
Sweet in the field between Windermere upper
& lower Roads. Figwort found growing on a
wall on the lower road.

July 3rd. Copyright St. John's Work -



which stands at the foot of the mountain at Myklum just adds the touch of humanity which is needed to link God, Nature & Man.

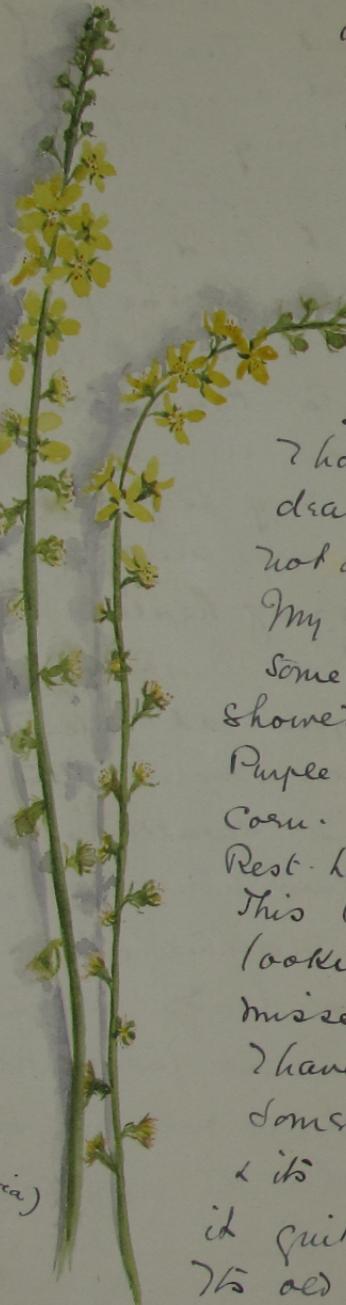
11 p28 pnew62

11 p29 p. 21162 27

51 p29 pmsu162 27

The heather was out near Keswick & quantities
of Pinkster's Nightshade lined the road to the
Falls. I shall never forget a lecture of Prof. Ordens
in which he told us that the Madonna Lily
is a descendant of that insignificant little flower.
The Rock Rose was growing a little farther on -
on the road to the Boulder Stone. No one seemed
to know exactly how it had got into that
position - possibly in the glacial period I suppose.
We walked round it & admired the lovely
valley that leads into Buttermere - the men
were busy below cutting down fir trees which
(they were evidently going to float down the
stream. Coming back we made our driver
stop & gather bunches of heather - it will keep
a long time in water. Just before we reached
~~Dulgar~~ Grasmere we stopped at a little wayside
inn to water the horses & were entertained all
the time watching the swallows in the roof -
feeding their young. Two little birds in one
nest never shut their mouths at all. There was
just room for their two heads in the entrance
to the nest & they remained there with wide open
yellow beaks all the time we stayed. Skipping
them occasionally when the indefatigable
parent birds brought them an insect.

What memories for
B. & J. when
both were young.



Agrimony.
(*Agrimonia eupatoria*)
Rosaceæ.

"Dorm-dwarf" & "Knight's miffoil" a many a man
used to be taken from the battle-field into the

July 21st My last summer day in
Humbeshire - As the train carried
me straight across country from
West to East I was really
delighted to lose sight of the
hills which had shut out so
much of the sky & got into
the undulating moors &
woods of Yorkshire.

Yellow corn-fields began to
skirt the line & among them
I hailed with great pleasure the
dear old Scarlet Poppy - that I had
not once seen in Westmoreland.

My first walk on the wolds
some way between Scarborough & York
showed me quantities of new July flowers
Purple & crimson, hawthorns, red-weed
Corn-cockle, purple Campanula -
Rest-harrow - & Yarrow or millefoil.
This last tough & rather ordinary
looking plant would be sorely
missed on our road. Sides for
I have seen it in the distance
sometimes like a shower of snow
& its old associations make it
is quite a romantic admixture.
Its old names are the "soldiers

monastery to have his wounds dressed by yarrow-rootweed.
The Corn-cockle seems to be exceedingly common in
Yorkshire - the long green spikes of its calyx make
it very beautiful.

The lesser bindweed
(*Convolvulus arvensis*)
was very plentiful in
the loose sandy parts
& must give much trouble
to the farmers from the
way in which it tightly
enlaces the corn stalks.

The tall white campion
(*Lychnis herpestina*) was
beginning to seed - but some
blossoms were still very sweet
& the scorpion grass or feudal
mousie - ear with its little
tiny blue eyes was creeping
among the furrows.

The Corn-mint with its delicious
scrub, wild-carrot (Bird's nest)
& Common chickweed & epipactis hiemata
were all plentiful - though probably hardly
welcome to the agriculturist. & the dear little
Scarlet pimpernel was there to tell me the weather
once more. This bright little plant with its yellow
anthers was much used once upon a time by ancient
leeches. Over the moors the fire-leaved heather,
(*Erica cinerea*), bearing its bells in clusters on the top



Hairy Mint
(*Mentha aquatica*)
Labiatae.

of the skudrobin was coming into blossom & the bee-keepers were beginning to think about taking their hives from the valleys to get the rich moor-honey.

" Those wastes of heath
Stretching for miles to leere the bee
Where the wild bird on pinions strong
Wheels round & pours his piping song,

And timid creatures wander free

The bird feeds on the young shoots & seeds of the heath but man makes from it ropes & in the Hebrides bundles of heath-sticks are laid across the stream, a herd down by stones with the top of the heath towards the current forming a net towards which the islanders drive their prey of fish. There are ^{in Gt. Britain and Ireland} five kinds of heath - there are 400 species

July 22 - 31st I have been out for several weeks this week I find that the same flowers repeat themselves in most of this district. In a glen on the way to the moors the white honeysuckle was in full flower clambering heavily over tall bushes & completely covering them.

The water forgetmenot & willow-herb was growing on the banks of the streams we passed.

I saw no butterflies but the latter blues ones & those only occasionally.



[Ononis fr. Grk. onos, an ass - which eats Rest. Harrow]



feeding the intruder under the impression that he was a raven. The bird had grown quite fat & big & looked very much like a young hawk. He puffed himself up magnificently where we traced him ruffling all his feathers & looking as if he would annihilate us if he could. He had an enormous appetite requiring to be fed on hard-boiled egg or meat every half hour. If we forgot he chirps miserably.

July 30th Sunday. I went for

a little store & brought home thirty specimens of flowers. The white campion & poppies grow very fine here even by the roadside.

I can gather the most lovely bunch in ten minutes.

Aug 1st Rain again - on the moors. I feel quite sorry to see how autumnal everything looks already. The fields are half sown with corn & all the wild flowers have lost their first beauty & look worn-out. The moors however are perhaps at their best - being covered

This week there has been great excitement over a Cuckoo that was found in a water wag-tail nest. The young wag-tails had all been kicked out & the Leguminosae. parasitic birds were still

21 p34pnell62



From Ilfracombe.
Ericaceae.

flocks of rooks & sea-gulls. Hundreds of little blue & brown butterflies were flitting about quite tame so that I cared easily have caught them

with great patches of sea-lavender.
The clusters of pale lilac flowers
accord well with the rather sad looks
of an east coast tidal river.

Aug. 29. The Sea-starwort is just coming
into blossom - it looks very much
like the Michaelmas Daisy but
not so fine. I spent several hours
on the marshes this morning.
The tide was just going down
leaving everything damp & smelling
of salt. I sat on the sea-wall
in the hot-sunshine & listened
to thousands of grasshoppers in
the coarse grass. On one side of
me was the river stretching away
into the sea - on the other the re-
claimed saltmeadows - covered with tiny
^{Dwarfed} sea-flowers - glasswort etc. growing on
the edges of the
stagnant f
of water -
mixture of
fresh & salt;

& visited by

Too bad to show.

Per _____

every now & then a handsome
buttidary dashed by. The Red
Admirals seem to frequent gardens
more than the marshes. I only
saw one pea-coat.

The ditches on the way home were
bordered with ~~was~~ very fine yellow
toad-flax & willow. herb, growing
among the blackberry bushes
& hips & haws. Moor-hens & water-rails are very
commonly met with here - whiles & when I was
sailing last week I noticed two herons & some
wild duck. I have often seen the latter flying
over our house.

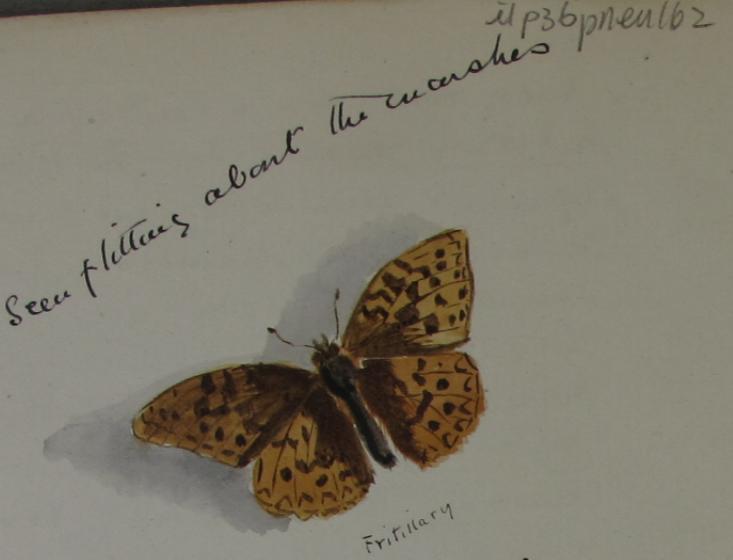
Sep. 1. Partridge shooting. The birds are very plentiful
this year & do not seem wild. We picnicked under
the elms by the side of a creek of the river & went
driving laden with the poor little dead birds.

The Black berries are still all red & green.
Sep. 4th. Today we had another picnic under the oak trees
that grow by the river & amongst rank thickets of
goose bushes & brambles. The goose is very easy
to pull out of the ground & makes capital firewood
if it is dead & dry. The yellow toad-flax grows
among it to the height of five or six feet & a
little pink flower of which I have not yet found
out the name, grows to proportions in many places
that it forms quite a mat. The persicaria is
very plentiful there too. We made a lovely pygmy
fire & had big apple-puffs & tea & cake.

21 p35pnell62 33



scarlet Primrose
from the garden



I found several kinds of mint but cannot yet distinguish them.

Sep. 6 - 20th. We have all been astonished this year at the numbers of big "Daddy long legs". Just outside our gate in the short coarse sea grass there are millions. The ground is alive with them & so it is every where in the meadows. The grass-hoppers too seem much more numerous than usual & there are thousands of small heath butterflies - and Red Admirals. I have noticed the latter frequent the dahlias & mulberry tree & seem altogether much more at home among cultivated flowers than the small inconspicuous butterflies. Possibly they feel more fitted in their gorgous raiment. The tamarisk is just coming out in all its glory - I do not know that this is a native wild flower or whether as some say it has been

il p36pnw162

seen flutter about the marshes

[Chicory is cultivated as a salad but more frequently for the sake of its roots which are roasted & mixed with ground coffee. Endive is a kind of Chicory.]

introduced from Germany but at one rate it taken kindly to English soils has done so for many years for in Brionne's Pastoral we find

"Among the rest the tamarisk there stood

for his wife becomes only known most good

for it used to be used for broom-making.

It is sometimes known as the Sea-cypress

"On rough crag Where the wild tamarisk whistles to the blast.

The swallows ought to have all gone by now but I saw some today (Sep. 20th) Yesterday a robin perched on the garden chair next to mine & gave me a song.

il p37pnw162 35-



(Cichorium intybus)
Wild Chicory or Succory
N.O. Composite
Picked on Hampton Banks
of a picnic (gbm)



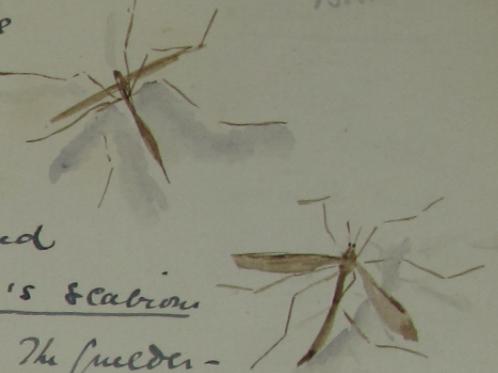
From memory - badly done.
on the Essex marshes.

Oct: 1. At Ambleside again. The country looks lonely in its autumn aspect. In the morning it is very cold & misty - almost foggy - later on the sun bursts out & makes every thing warm & mellow. Fairfield Basin is more beautiful than ever. Many flowers are still in bloom here that have finished flowering in trees; honey-suckle, stitchwort the lesser, golden Rod, Water Dropwort, Brooklime, moneywort, red campion, striped veronica, wild mint, ox-eyed daisy, burnet, wood betony - yellow balsam & ladies mantle - The leaves of the latter have turned a lovely green red.

Oct: 2nd Today we descended about the moor & found a good many fruits. The big hogweed, the angelica - the latter can be distinguished by its dark red stem - smooth near the root.

The few remaining blossoms were of a beautiful delicate white & pink. The cud-weed was in flower - but it has to be closely inspected to be appreciated - we found numbers of sweet sheep's escallion as well as Devil's bit - The quelder-

my companion
At former prayer
B.H.



Rose berries were very juicy & bright & picked quantities of long stems of burdock. We found specimens of the lady, male & mountain hawks ferns.

Oct 3rd Several of us went for a long walk on Loughrigg Terrace. Rydal lake was looking as calm & still as on last Good Friday & Nabs Scar was most beautifully reflected in it. As we approached the corner that leads to the first "Rest & be thankful" seat, we found



The ivy-leaved road-flax belongs to the same order but looks very different - being a little creeping violet flower.

³⁸ X Order Dipsacaceae or Saxifrage

a delicious mossy bog covered with the Grass
of Panassus.

Flowers
and stamens
golden
from the
species

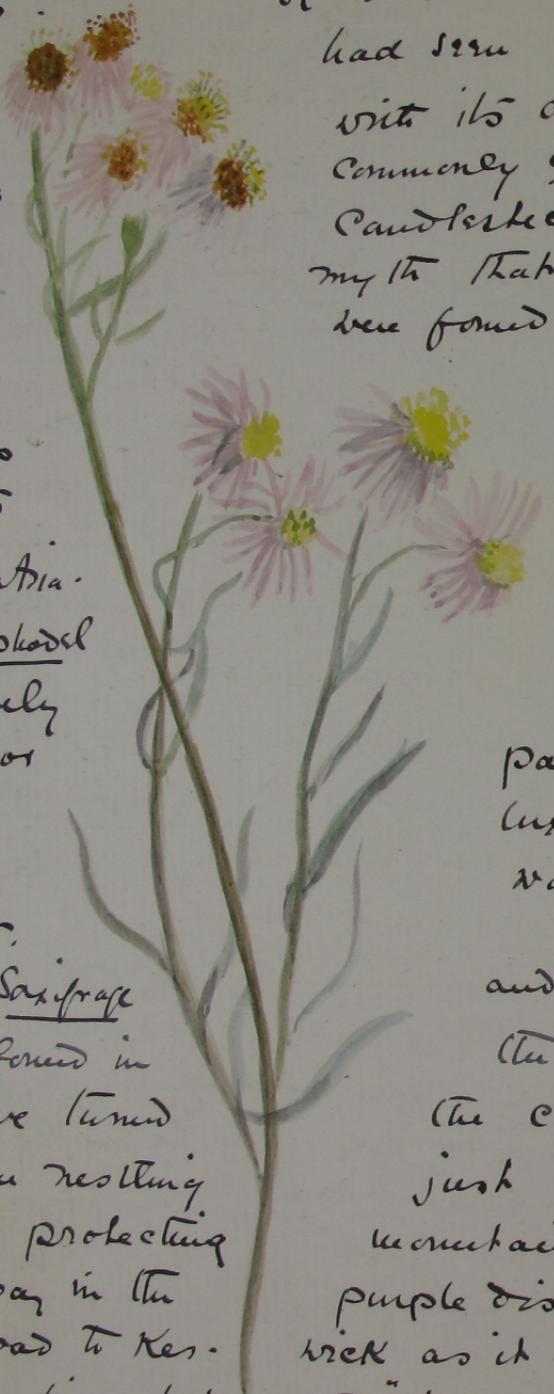
It is a
moist bog
of the Mts.

& of Persian Asia.

The Boy's Apostrophe
of such lonely
deep red as
grew to
one clump
pine forest.

The Silvery Saxifrage
were to be found in
just as we turned
of grassmen resting
in the protecting
view & away in the
face the road to Kes.

through the hills between the "lion & the lamb" on the left
& Great Sandal on the right. They were beginning to



il p40 pNell62

It was the first time I
had seen the little delicate
with its dark veined petals
commonly called the Seven
Sisters. It is so called
myth that the most beautiful
were found on Panassus.

native of the
of Britain.

of S. Europe

We also found
in seed and mosses
Colours, a bright
pale green - & they
luxuriantly that
was like a miniature

and the Cotton Grass
(the same bog).

The corner the Lake
just where it ought to
mountainous bush upon one
purple distance we could

pick as it winds upwards

il p41 pNell62 39

burn the yellow bracken there already & we could
see a blue column of smoke winding away in the
still autumn air. On our homeward way we

passed one of the prettiest
little cottages I have seen about
here. It was whitewashed
standing a little way up
the hill, commanding an

exquisite view over the
Langdales. Its little garden
on the slope was crowded
with a luxuriant growth of
old fashioned flowers - dahlias,

red, purple & yellow, tall white & magenta phlox
and here & there a pale faintly purple colored
hydrangea - such plants as are only seen as
a rule in the "un-gardened" part of a fashionable
garden & which had grown so tall during the
damp weather that they almost blocked the
lower parts of the windows.

Oct 4th. Our long walk yesterday had
tired us a little so we only
walked to Windermere today
& gathered Figwort seed
& enjoyed the view of the
Langdales. Always like
them best from Windermere

Orange
sternum





Oct 6th Scrambled about in the fields behind Springfield in search of acorns. It is very odd, but we could only find two (though we looked most carefully), oak. trees are plentiful. We were fortunate in finding two beech-nuts nestled inside their (then) dandy bracts. Which are as soft as silk. We saw a bed of Michaelmas Daisy growing on both sides of the Rockay just before Peeler Bridge is reached - but I fear it must have been only a wanderer from somebody's garden for the Bohay books say the Sea Star-wort is the only wild Michaelmas Daisy we have. We brought in some lovely yellow bracken leaves, red brambles & figwort & Miss Hodges brought us in the afternoon some canary seed to paint which I have put on the opposite page. The little moss or fungus that is on the back of this was formed by one of the children - I have not yet found out its name, its history.

Oct. 7th The air seemed rather oppressive today so we only walked to the piece of ground above Stot

Ghyll, but on the way I picked the yellow Balsam for the first time, as it is a rare plant only growing in mountainous districts. I was very pleased to see it. There was a great deal of it growing here. The wall we companion pulled it up to show me the & the nodes that swell at each. The flowers grow very curiously stalk running along & underneath of the leaf until it reaches of the leaf where it drops about 6 bracts at the end the pretty I also found the white Hemp shrubs went to Turkey flowers still blossoming. I have not yet seen ^{here} any Hipplewort - wort Plantain, Knapweed, Hawkweed, Self-heal, leaved toad-flax, Welsh Poppy, goldenrod - Scolopendras Devil's bit & Shepherd's Ragwort & Marsh Ragwort, blackberry, angelica & Hag-weed. I meet almost daily in my walks. Today real wild raspberries were brought in such fine ones from the fields by the Rockay.

il p44 pneu162

42

an enormous Lady's Mantle leaf that the autumn had painted all sorts of gorgeous colours - leaving it its original summer green round the edge & flanking into yellows & reds towards the base. The bases are crowded with bracken, hips & haws, blackberries & raspberries - a yellow poppy here & a violet Knapweed there, blending with ^{each} other & forming a perfect feast for the eye to regale itself upon -

11th. Today I went to Rydal Terrace. It was such a very still, sunny misty autumn day that we thought it a pity to spoil the harmony of a scene by hurrying. So we sat down on some stones on Wal Lake & looked at the lake. It was drearier than I have ever seen it - & the ^{reflecting} shadow of the mountains & the trees clearer than the realities.

We only picked bracken & Bird Cherry.

The latter has the most wonderful colouring I could not help trying to paint it - (see next page.) because we never see it in the South. but I cannot manage to show the pinky-red of the leaves when the sun shines through them - nor the graceful droop of the whole tree shedding showers of its beauties with the slightest breath. The Bird Cherry near Milner Bridge is most disappointing. It is as green as grass still & shows no sign of changing.

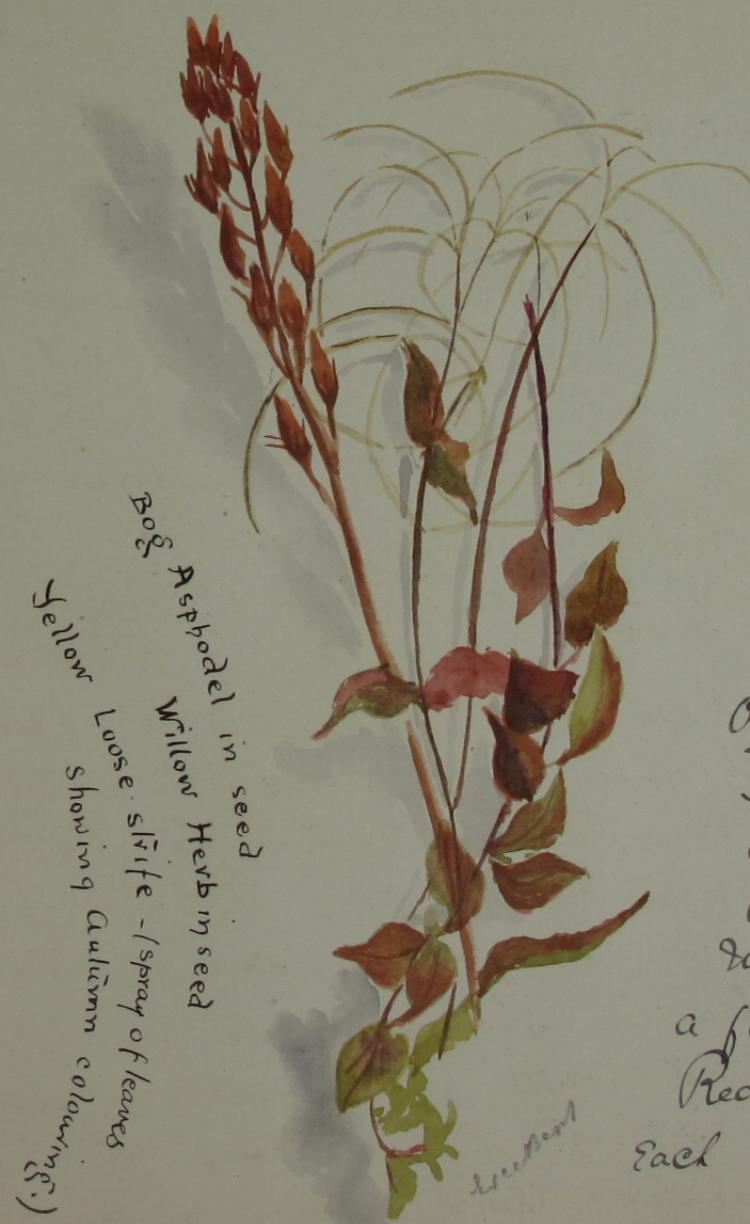
il p45 pneu162 43

12 Oct. Went to see how Windermere looked in the Autumn - Another typical day - all the mountain wrapped in clouds dark at the top & lighter as they rolled gradually down - softening all the beautiful colouring below - The sun sent a shaft of light between two clouds across

the very still lake & we saw the water shimmering & glistening.

Oct 15. It is much colder. The wind has been very busy in the night & has blown great bunches of leaves off the trees. Some branches are already bare -

Oct 16th. Still cold & showery. but the sun gleams very brightly most of the morning. We saw a faint rainbow on Redsees today - each change of the clouds



Boop Asphodel in seed
Willow Herb in seed
Loose strife - spray of leaves
Yellow showing Autumn colouring.
(sp.)

11p46pneu162



Picked from a tree on
Nabs Scar -

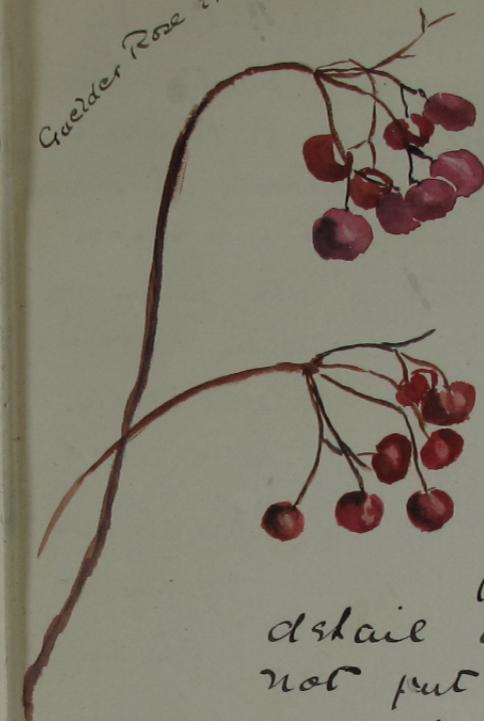
Wild Cherry leaves
in October.
J. R. Newell

11p47pneu162 45

Behind & over the mountain seems to make a grander picture than the last. We walked below Tinkers Crag today & two very fine strawberries were found - I saw a little weak looking harebell - it had the same helpless look about it that the wasps have just now. Some red Campions were lingering about, wood betony, herb Robert, white hemp nettle, self heal were all still in flower. I picked a handful of seeds. The mountain-sage, the legumes of the goat broom, the pretty curly Willow-herb, the hemp dead-nettle - the purple loose-strife - the goldenrod with little fluffy balls of pappus - a very dilapidated Water avens seed showing its little hooks. & that is all. One stumpy little oak-tree was bearing quantities of spindle-galls - as well as two Cherry galls & an oak-apple. Coming back to Kelsick we found bunches of the American Hawthorn in fruit, but of course that is not indigenous. I forgot to say the Meadow-sweet was still out - & I do like its little curly fruits - but I fear they are too difficult to paint. The Knapweed fruit I brought as well & the capsules of the Campion - that are shaped so prettily.



Gelder Rose fruit



Perhaps it is the fault of the Nursery Rhyme - *Curious who*
~~is~~ *that one never can help taking*
the part of the fly when one sees it
in the clutches of a spider. I
was quite pleased when Miss Gilbert
picked up a pretty yellow & brown
one with a wing & made him release
his hold. We were walking by
the Brachay & had collected
about 30 fruits in half an hour
but as they will all be found in
detail at the end of the book I will
not put them here. The brooklime, buttercup
& sow-thistle were in flower, but their heads
were languishing rather forlornly. I found some
pretty clumps of lung on the rocks in the
stream - but the pink clusters of flowers had
turned quite crisp & dry. Coming home we
searched under the beech-trees at Croft for
snail's shells & was rewarded by finding one
tiny laminated shell, too small to paint, & one
tiny round flat shell that looked as if it might
belong to the hairy species. The resting buds
had already formed in the axils of the leaves
of the trees & if this extremely close weather
continues I shan't wonder if they are
deceived into thinking spring has come again.

tip 56 p 162

A. Raspberry Leaf &
(the fruit of the Rose)



Nov. 1. My diary has been
away on a visit so there
will be a fortnight's
space between this note
& my last - a space
that a little lines of
poetry however
might well
have filled.
"Raindrops
patter on
the walls."

'Drearly face the showers
'Lifeless droop the broken stalks
'Over the scattered flowers.'

This added to the misty night caps on the mountains
is the storm of Fleetlesside for very nearly 14 days.
The Stock is raging like a miniature Tiber & looks
quite launy. Some of the sledgers went to see the falls
yesterday & said they had never been so fine this year.
I shall & am today - but probably the best will be over.
Springfield garden has a little lake in the middle of it
& the fields beyond are flooded. I do not know where
all the birds are. but 6 robins & a wagtail or two
are about all & I have noticed going to & fro.

11p51pneu162

Nov. 7th
There are
described.
The sycamore
over the stock
had two little
green leaves
on it today -
new ones & the
whole tree looks
quite ready



to burst into its summer garb at a day's
notice. There are spindle berries alone - quantities
of them were found this week going to Tunkers
Crag. The fruit remained long after the leaves had
fallen. It is most pretty & interesting - & will make
an important addition to the list of autumn fruits
described further on - but I found them most difficult
to paint & fear they hardly look like what they are.

Nov. 9th. Walked to Rydal in the softest rain -
The grasses all dead & drooping on the edge of the
stone walls were glistening like diamonds with millions
of rain drops - the tall dead man-of-war hawk-weed
made beautiful straight sprays behind. I thought some
of them in to paint but they are not so pretty out of the rain

11p52pneu162

Nov. 10th

An opposite day.

I am now off
to find something
fresh - In the
little copse
to the left of
Slack Gill I
found blackberry
leaves still

quite green &
quite big bunches
of blackberries -

also a strong
intercept that might
have belonged to the
Spirea & two pink
Campions - I heard

that primroses were
seen today in some
garden & the lilacs
are growing quite green -
The robins look very
happy & pugnacious - the
wren is quite chirpy -

I noticed two large herons flying
in a slow stateless way over Rydal,
thin wings showing distinctly against
a deep stormy looking cloud -



The Wild Plum
Nov. 10th
Watercolor

50

Nov. 20. Went to Dowood -
it was a lovely afternoon
after the recent rain
the path was in most
places through the wood
an inch deep in water -
We found several lovely
red in leaves. A spindle
berries were hanging
on the trees. The wood
Bistort & Campion were
still in flower. The kegs
of the Sycamore were
hanging down & brown
on the bare branches &
the hips & haws were
turning a dark red -
some already quite black.

Nov. 28th Nature seems to
have been very quiet lately.
Nothing is stirring except perhaps the birds - but it
is so mild that even they do not seem disposed
to their usual winter friendliness. The Chaffinches
& Robins come to our window - (if we put crumbs out)

21 P. 5 p.m. 162



Golden Rod in seed.

Caught in Brit. Guiana



The Witch-hazel, oak, chestnut & sycamore - are all
quite different in character - but require pictorial
illustration which I hope to give at some future
time. The hair-grass was growing on the wall -
but I was surprised to find it had a name.
Somehow one passes those common things so
often that one forgets they can be in a botany
book. The fescue grass was another common grass
that I had not heard named before. In a larch
tree we found a big larch gall that looked from
below like a squirrel's nest. I think these galls
are most curious & delicate. The birch trees near
the water looked quite tortured.

21 P. 5 p.m. 162 57

The blue-lets
are very noisy
in the front garden.
Also the owls are
busy at night.
Today we went
up the Kirk-stone
Pass road. It is
between two stone
walls so there is
not field for much
investigation by the road-side

but we climbed the trees above
our heads. The resting-places of
the Witch-hazel, oak, chestnut & sycamore - are all
quite different in character - but require pictorial
illustration which I hope to give at some future
time. The hair-grass was growing on the wall -
but I was surprised to find it had a name.
Somehow one passes those common things so
often that one forgets they can be in a botany
book. The fescue grass was another common grass
that I had not heard named before. In a larch

tree we found a big larch gall that looked from
below like a squirrel's nest. I think these galls
are most curious & delicate. The birch trees near
the water looked quite tortured.

Natural History Notes.

ii p55 pheul62

Mammals (from a Latin word meaning the organ that gives milk), are animals that give suck to their young. Many are now extinct in the British Isles, but there is a large number left though these are comparatively small.

The Fox & Badger are the largest - the others are Bats, Hedgehogs, rats, voles, stoats, weasels, Larks, rabbits, moles, shrew-mice, mice, otters, martins, squirrels ^{& how about Red deer} _{i. Hittingham battle}

Bats There are from fifteen to twenty species of natural bats. The Common Bat & the Great Bat are those most generally known.

If these are carefully examined it will be seen that there is considerable difference in the appearance, but not in the structure. The wide mouth, tiny sharp teeth, & wide-spreading wings are alike. The wings are stretched out like hands joined by a thin fine skin. The thumb is furnished with a hook; the toes are free & have also hooks to enable the bat to hang head downwards. The ears are large & sensitive. The outer ear or tragus only is exposed when resting

ii p56 pheul62 53

the outer ear being turned back & laid flat upon the head. The bat is eminently fitted for doing in the evening what the bird does during the day - viz. to clear the air from insects. At night innumerable tiny moths come out, so minute that they are called the micro-lepidoptera, & so numerous that they have been known to devour whole trees. These are easily snapp'd up by the bat, forming its chief food.

The large bat eats larger food e.g. beetles & Cockchafers.

The young ones are born singly or in pairs - at first they cling to the mother, but they soon learn to fly. They are born naked & much resemble young mice.

The large Bat is called the Noctule. The one shown in illustration was found caught in a trap by the edge of a pond where it had evidently come to drink.

The small Bat. Pipistrelle was found hanging dead & dry in the corner of a barn.

The haunts of bats are barns, old hay, low trees & almost any out-of-the-way corner

⁵⁴ The shrill cry is sometimes pitched so high that it is not easy to hear it.

The wings of the large bat measure about 16 inches across. Other kinds of bats are:

Two horn-shots Bats.

Long-eared

Barbastelle

Daubenton's -

Hedgehog.

In Lincolnshire the hedgehog is called the prickly urchin, possibly from the Lat. *ermiacus*.

In Devon: it is the apilace or hedgeboar.

It is also known in some places as the Vassapeg or Furre-pig. The upper part of the head doesn't project over the lower in the same way as a pig.

Hawks, large owls, falcons attack hedgehogs piercing the prickles & killing them through the head.

The long snout is of great use in grubbing for food e.g. worms, wood-lice, cock-chafers, frogs etc.

When first frightened the hedgehog will run for cover, but if there is none to be found it will roll itself up, by drawing the loose skin of its neck over its head like a hood. This makes the prickles stand upright, instead of lying smoothed down towards the tail. Each spine is bent slightly at the end nearest the skin & is fastened into the skin by a



little knob resembling a pine head, so that it is impossible to pull it out. The claws are very sharp enabling it to climb up trees & walls. When it reaches the top of a wall, it curl's itself up & falls the prickles preventing any injury. The hedgehog is a hibernating animal. It lays up no store of food, but goes to sleep about the end of September.

Rats.

The English black rat has almost been exterminated by the brown Norwegian rat, which most naturalists however think has travelled in ships from Russia. The female rat has a family of 13 or 14 about three times a year; these again have families in six or seven weeks. Lincolnshire used to be so infested that they were killed & carried away in timber loads. The mother makes a nest of soft wool or hay for its litter & when disturbed will carry them away in its mouth as a cat does. They are very careful of their old & feeble if provisions are plentiful, if scarce the strong fall upon the weak & kill them. Rats are remarkably clean animals. They have been seen to go down to the ponds & there wash & comb themselves. It is a fact that if a slack is taken possession of by mice, rats will not go there - this may possibly be because the mice are so much dirtier.

⁵⁶ Rats frequently migrate in large companies, going from one neighbouring farm to another. The teeth, like those of the rabbit, continue growing from the root - if the companion teeth in the upper or lower jaws be lost, its fellow will go on growing & gradually cause death, unless it becomes fixed outwards. Rat-traps should be set in the run of the rats. A good trap is a tub half full of water with a balancing lid. The rat will run over it, fall in & be drowned. This is one of the most painless ways of killing it, but it is better to have a good rattling dog - they grip the animal by the back of the neck & death follows instantaneously.

Vole. This little animal is commonly & wrongly called the water-rat. It is very dark brown, almost black, above, white underneath. It has a short tail, long body & blunt nose; it may be briefly described as something between a rat & a mouse. The teeth do not interlock & the jaws move to & fro showing that it belongs to the gnawing & nibbling family (*Rodentia*). There are two kinds of voles - one the semi-aquatic, one the land vole. They feed upon vegetable food. The field vole (Aneola apestris) burrows under the soil for the newly-sown corn, & in the winter inhabits nests & barns for the same purpose. For this reason it is a great enemy to the farmer & its increase is due to the destruction of birds. It has been stated that every acre is worth £5 to the nation for destroying animals like voles. In the spring of 1876 Wall district

^{11 p60 pnew162 57} between England & Scotland, which is used for grazing ground, for sheep was completely destroyed by voles. The shepherds destroyed as many as they could but were unable to diminish them sensibly. Water Vole (Aneola amphibius) - This is often called the water rat. It is only a vegetarian as is shown by its teeth. It feeds on aquatic plants and can masticate the bark of the common rush. The finely cuticle is not nutritious but it serves them to keep down their teeth. The water vole is found near clear streams & their banks may be seen full of the holes which it has tunneled. In many ways it is nearly allied to the beaver. It is an underground dweller & a complaint against it is that it weakens the banks of the streams. This may be true but it is otherwise very harmless.

Common Weasel. The weasel is gifted with a little snaky-like body, a long powerful neck & very sharp teeth. It eats animals as large in comparison to itself as an elephant is to a dog. It has even been known to attack men & always flies at the throat of its opponent. The skull of a rabbit which has been killed by a weasel will be seen on examination to be bored with two tiny holes. The weasel can spring to a great distance & can climb easily. Its bite is fierce & deep & five or six weasels uniting will easily overcome their victim. It eats various animals, chiefly mice, for which the farmer is very grateful to it, but it also carries off an occasional

58

1/p61pnw162

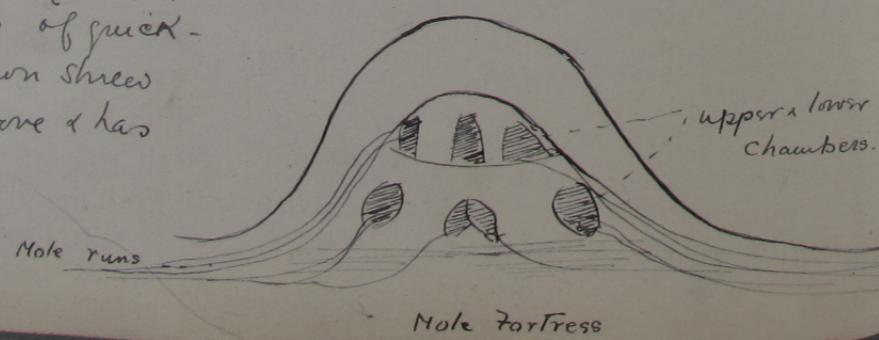
chicken, duckling or pheasant. It is a great hunter, hunting its prey with eyes, ears & nose & if it loses its scent it quarters like a dog. Its dwellings make the holes in hedges which in Suffolk are called 'smiles'. It has been tamed but the evil odour it excretes is a great disadvantage. The weasel belongs to the same tribe as the Pole-cat, ferret, martin & stoat.

Moles.

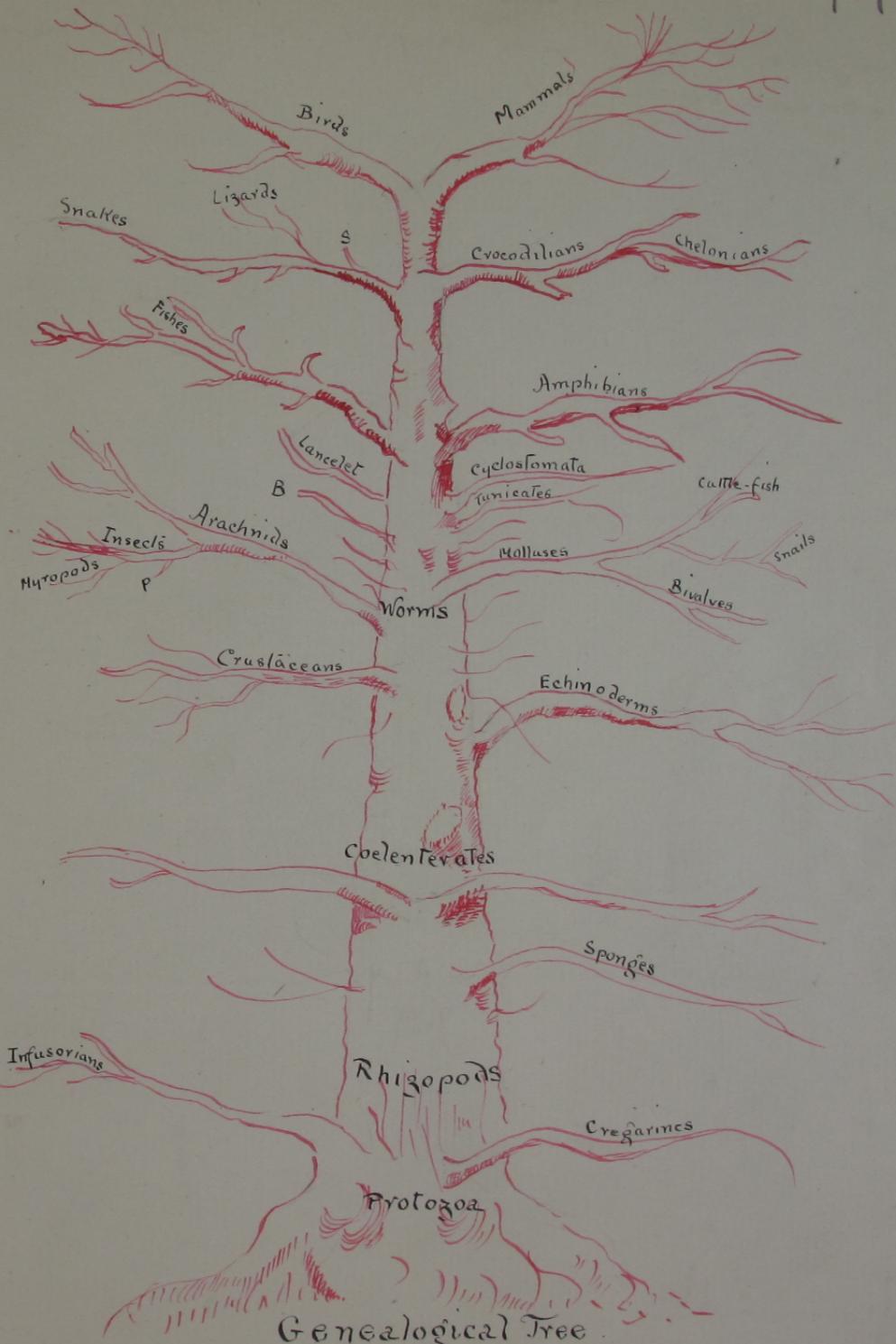
Moles belong to the insectivorous mammals with shrews & hedgehogs. They all have pointed teeth something like the Carnivora & feed upon worms, grubs & insects. The fortress is generally under a hollow tree or some place of that description. It is probably used by the moles as a place of defence. Mole-hills are not the nests of moles, but are heaps of earth thrown up by them as they hunt for worms &c. The lower gallery of the fortress has five passages leading into the upper & smaller one & the latter communicates with the central chamber by three tunnels. As a rule the burrows run horizontally near the surface, but this depends upon the movements of the worm. In very cold or dry seasons the mole would have to dig deeper.

The skin of the mole's skull is very tough with two large bones on each side.

The Common Shrew may be known by its very long snout, long body & short legs. In dry weather shrews may be seen lying about dead all over the fields. The cause of this is a displaced vertebra. It usually has a family of about 6 in little nests of grasses & leaves. The water shrew is very pretty & looks when moving about like a living mass of quick-silver. The common shrew is very dark above & has a white breast.



1/p62pnw162 59



The small classes in the centre indicate the classes of worms. The letters B, P, S indicate the positions of Peripatus, Balanoglossus, Sphenodon or Hatteria respectively.

6.

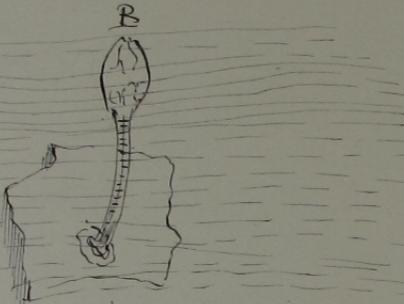
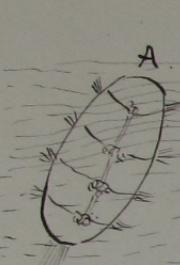
Sea-side Objects.

Up63pneul62

Hanging to the prawn shaped sea-weeds - rarely uncovered by the tide.

The Briny Ocean

I

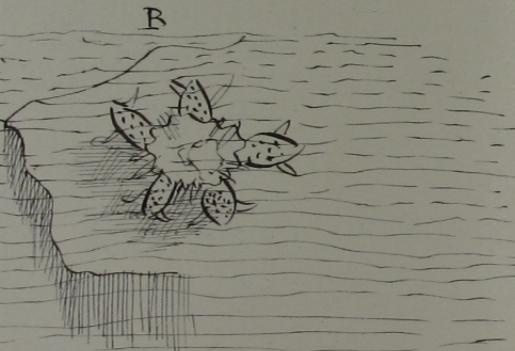


Infancy of feather star

A. The jelly animal swimming with its lashes.

B. Fixed animal from which the feather star afterwards breaks off.

II



Infancy of
Brittle star.

A. Jelly star
animal
while star.
fish forms
inside.

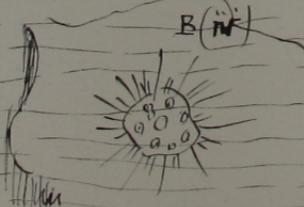
B. The young
brittle star
settled on a
rock.

III.
Common Star-fish

A. Jelly animal

B.

C. Common
Star-fish



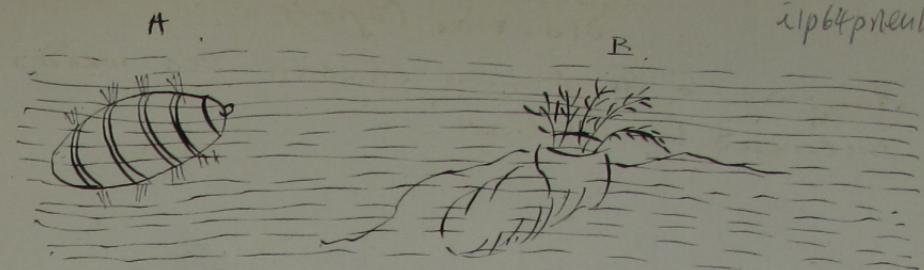
IV. A. Jelly animal with lime rods.

B. Young Sea urchin.

V.

A. Jelly
animal

B. Young
Cucumber.



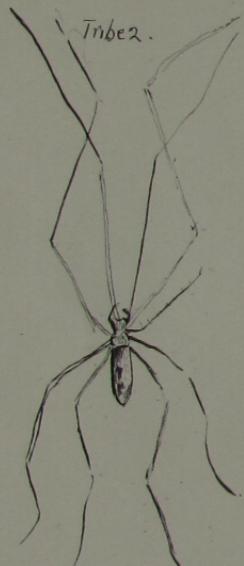
Up64pneul62 6.

Al pb5 p nseu 162

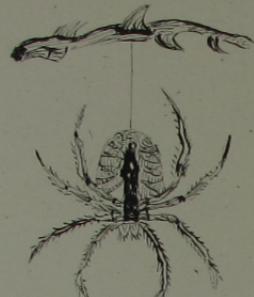
Tribe 1 Senoculina



Oonops pulcher. (length $\frac{1}{3}$ inch)
Fam: Dysderidae



Pholcus phalangioides
Fam: Theridiidae Tribe 2.



Epeira diadema
Fam: Epeiridae



Aqelenia labyrinthica
Fam: Aqelenidae. Tribe 2.

Tribe 2.



Dolomedes mirabilis
Female with egg (enlarged)

"If you wish to live & thrive
Let a spider run alive."